

RK40101

Leader in Biomolecular Solutions for Life Science



## Mouse T Cell Activation Kit ( Anti-CD3/CD28 )

Catalog No.: RK40101

### Basic Information

#### Observed MW

#### Calculated MW

#### Category

Flow Cytometry Panel

#### Applications

FC, in vitro T cell stimulation/activation

#### Cross-Reactivity

Mouse

### Background

T cells are activated by signaling through ITAM (immunoreceptor tyrosine-based activation motif)-containing CD3 signaling chains that associate with the T cell receptor. Co-stimulation through CD28 on T cells provides an additional signal required for effective T cell activation.

**CD3:** Is a complex composed of 4 distinct subunits, Delta (CD3 $\delta$ ), Epsilon (CD3 $\epsilon$ ), Gamma (CD3 $\gamma$ ), and Zeta (CD3 $\zeta$ ). It is a surface structure associated with the T-cell receptor (TCR) to form a complex involved in antigen recognition and signal transduction. CD3 is a pan-T-cell marker and is expressed by thymocytes and all mature T cells of the peripheral blood and lymphoid tissues.

**CD28:** Is a 44 kD disulfide-linked homodimeric type I glycoprotein. It is a member of the immunoglobulin superfamily and is also known as T44 or Tp44. CD28 is expressed on most T lineage cells, NK cell subsets, and plasma cells.

### Recommended Dilutions

**FC** Recommended starting concentration is 2  $\mu$ g/mL

### Immunogen Information

#### Gene ID

#### Swiss Prot

#### Immunogen

Recombinant protein of mouse CD3 and CD28.

#### Synonyms

### Contact

 [www.abclonal.com](http://www.abclonal.com)

### Product Information

#### Source

Armenian Hamster/Syrian Hamster

#### Isotype

Armenian Hamster IgG1/Syrian Hamster IgG2

#### Purification

Affinity purification

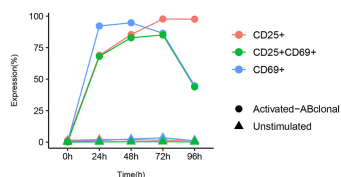
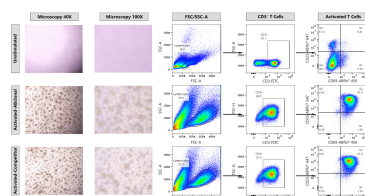
#### Storage

Store at 2-8°C. Avoid freeze.

Buffer: 0.2  $\mu$ M filtered in phosphate-buffered solution, pH 7.2, containing no preservative.

Endotoxin Level: Less than 0.01 EU/ $\mu$ g of the protein (< 0.001 ng/ $\mu$ g of the protein) as determined by the LAL test.

## Validation Data



C57BL/6 mouse splenocytes were activated using Armenian Hamster anti-Mouse CD3 mAb (A27913,2ug/ml) and Syrian Hamster anti-Mouse CD28 mAb (A27914,2ug/ml), or competitor 's CD3/CD28 antibody for 72 hours. The unstimulated control was performed without treatment. Cells were fluorescently stained with FITC Anti-Mouse CD3e mAb (A23322,5  $\mu$ L/Test), ABflo® 647 Rabbit anti-Mouse CD25 mAb (A23808,5  $\mu$ L/Test), ABflo® 450 Rabbit anti-Mouse CD69 mAb (A26449,5  $\mu$ L/Test). The degree of T cell activation are defined as CD25+CD69+ cells on CD3+ T cells gate.

The expression of CD25 and CD69 in mouse CD3+ T Cells changes with activation time using Mouse T Cell Activation Kit ( Anti-CD3/CD28 ) (RK40101,2ug/ml).